

R E V I E W S

The Neocortex of Macaca mulatta. By G. VON BONIN and P. BAILEY. Illinois Monographs in the Medical Sciences, Vol. v, No. 4, 1947. (Pp. 163, 62 plates. \$ 3.00.) Urbana, Ill.: The University of Illinois Press.

This monograph deals principally with one aspect of the morphology of the cerebral cortex in *Macaca mulatta*, namely the cell laminae visible after staining with thionin. It is part of an extensive investigation into the comparative histology of the primate cerebral cortex, and, as such, is a valuable contribution to the problem despite the inevitable difficulties in interpretation which are partly technical and partly personal in origin.

On account of gross inaccuracies in Brodmann's publications the authors have reluctantly discarded his numerical notation in favour of Economo's less familiar symbols. They stress the absence of sharp dividing lines between the great majority of histologically separate areas, and produce a 'brain map' which eliminates many of the complexities existing in the literature. They mention, in particular, the presence of three distinct varieties of homotypical neocortex in the macaque, frontal, parieto-temporal and occipitotemporal, and are impressed by the great similarity in cortical organization between the macaque and man, suggesting that there may be a 'structural pattern of cortical organization' common to the primates and even to all mammals.

It is not quite clear why a chapter on the growth of the brain is included, especially as no details are given of the age or brain/body weight ratios of the monkeys used, and the question of variation in the pattern from brain to brain is not discussed. Similarly, it would have been valuable if the criteria adopted for establishing the identity of the various layers in different regions had been explained.

The work is particularly valuable in that it calls in question the generally accepted cortical maps and, by pointing out the inherent lack of correlation between this type of investigation and the physiological findings, stresses the need for further research. It is to be hoped that the other morphological characters will be taken into account as it is only in this way that the significance and homologies of the laminar pattern can be assessed.

The authors are to be congratulated on a large series of excellent photomicrographs which, together with a concise text, present the complicated subject in a form which is readily comprehended.

G. J. ROMANES

Organic Form and Related Biological Problems. By SAMUEL J. HOLMES. (\$5.00.) Berkeley and Los Angeles: University of California Press. 1948.

In this volume Prof. Holmes has put together twelve essays dealing with various aspects of the problem of organic form, with an introductory chapter which, only too briefly, summarizes the main arguments. Many of the essays have already appeared elsewhere and, as a result, there is a certain lack of integration in the volume as a whole—which can reasonably be regretted in contributions deeply concerned with regulating mechanisms. But if organic wholeness is lacking the volume does possess a continuous train of thought, mechanistic and strongly anti-teleological, relating to the problem of how organisms, and more particularly developing organisms, 'are able to regulate their activities so as to correct departures